

IN THE SPECIFICATION:

On page 1, after the title, insert the following heading:

BACKGROUND OF THE INVENTION

On page 3, after line 17, please add the following heading:

SUMMARY OF THE INVENTION

On page 4, lines 5-17, please amend the paragraph to read as follows:

This objective is achieved by a secondary ion mass spectrometer, and by the concomitant ion source based on the above-mentioned overall concept ~~of Claims 1 or 6~~, in which the liquid metal film consists of pure Bismuth, or of a Bismuth alloy with low melting point, whereby a Bismuth ion mixed beam is emittable from the ion emitter under the influence of an electric field. From this mixed beam, one of several types of Bismuth ions, whose mass comprises a multiple of the mono-atomic, singly- or multiply-charged Bismuth ions Bi_1^{P+} , may be filtered out using a filtering

device as a mass-pure ion beam that consists exclusively of ions of the type Bi_n^{p+} for which $N \geq 2$ and $p \geq 1$, and n and p are natural numbers.

On page 7, delete lines 1-2 and insert the following paragraph and heading:

~~Essential characteristics, advantages, and design principles will be explained using Figures, which show:~~

For a full understanding of the present invention, reference should now be made to the following detailed description of the preferred embodiments of the invention as illustrated in the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

On page 7, after line 12, please insert the following heading and paragraph:

DESCRIPTION OF THE PREFERRED EMBODIMENTS

The preferred embodiments of the present invention will now be described with reference to Figs. 1-3 of the drawings.

Identical elements in the various figures are designated with the same reference numerals.

On page 12, after the last line, insert the following paragraph:

There has thus been shown and described a novel mass spectrometer and liquid-metal ion source for a mass spectrometer of this type which fulfills all the objects and advantages sought therefor. Many changes, modifications, variations and other uses and applications of the subject invention will, however, become apparent to those skilled in the art after considering this specification and the accompanying drawings which disclose the preferred embodiments thereof. All such changes, modifications, variations and other uses and applications which do not depart from the spirit and scope of the invention are deemed to be covered by the invention, which is to be limited only by the claims which follow.